

21-GP1-160 Economic Impact Data Sheet

Briefly summarize your proposal's primary economic impacts and benefits to building owners, tenants and businesses.

Requires heat loss through PTACs, PTHPs, and other through-wall mechanical equipment to be calculated as part of envelope U-factor compliance, providing a more realistic assessment of envelope heat loss through PTACs and PTHPs in exterior walls, which is several times greater than heat loss through a typical code-minimum exterior wall assembly.

Provide your best estimate of the construction cost (or cost savings) of your code change proposal? (See OFM Life Cycle Cost [Analysis tool](#) and [Instructions](#); use these [Inputs](#). **Webinars on the tool can be found [Here](#) and [Here](#)**)

\$[Click here to enter text](#)./square foot (For residential projects, also provide \$[Click here to enter text](#)./ dwelling unit)

Show calculations here, and list sources for costs/savings, or attach backup data pages

Provide your best estimate of the annual energy savings (or additional energy use) for your code change proposal?

[Click here to enter text](#).KWH/ square foot (or) [Click here to enter text](#).KBTU/ square foot

(For residential projects, also provide [Click here to enter text](#).KWH/KBTU / dwelling unit)

Show calculations here, and list sources for energy savings estimates, or attach backup data pages

Cost

A typical PTHP unit fits in an opening of 42 x 16 inches = 4.7 square feet

Walls of an apartment building floor 65 x 100 x 11 feet floor-to-floor would be 3630 gross sf.

Subtracting 840 sf (12 apts x 69 sf each) for fenestration would leave 2790 sf

Assumed U-factor for PTAC = 0.5

Max U-factor for wood-framed walls = U-0.051

Opaque walls depreciated for PTHP = U-0.061

To bring those walls back to U-0.051 requires R-13 cavity + R-12 c.i. (instead of R-13 + R-7.5 c.i.)

From Table A103.3.1(2)

Additional cost for R-12 (2-1/2") insulation (instead of R-7.5 (1-12") c.i.)

Additional \$500 per 1000 sf @ 2734 sf = \$1,365 + \$200 for larger fasteners = \$1,565

Cost per sf of floor area = \$1565/6500 sf = \$0.24/sf

Seattle HDD = 4424 Spokane HDD = 6655

UA w/ PTHP = $0.061 \times 2790 = 170 \times 4424 \text{ HDD} = 752,920 = 753 \text{ kBTU}/3.4 = 221 \text{ KWH} \times \$0.11 \times 24\text{hr} = \583.44

UA w/o PTHP = $0.051 \times 2790 = 142 \times 4424 = 628,208 = 628 \text{ KBTU}/3.4 = 185 \text{ KWH} \times \$0.11 \times 24\text{hr} = \488

$\$583 - \$488 = \$95$ per year savings

List any code enforcement time for additional plan review or inspections that your proposal will require, in hours per permit application: